IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

ATTY DOCKET NO.: **AT9-97-308B**

In re Application of:

RONALD R. BUSH

Serial No.: **09/498,293**

Filed: **February 4, 2000**

For: SECURE ENCRYPTION OF DATA
PACKETS FOR TRANSMISSION OVER
UNSECURED NETWORKS

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Examiner: **John M. Winter**

Art Unit: **3621**

Customer No.: 45502

Conf. No.: 8618

APPEAL BRIEF UNDER 37 C.F.R. §41.37

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This brief is submitted in support of the appeal of Examiner John M. Winter's final rejection of the above-identified patent application. This appeal was requested in a Notice of Appeal under 37 C.F.R. §41.31 submitted and received by the U.S. Patent and Trademark Office on June 23, 2005. Appellant hereby requests a one-month extension of time to the period for submission of this brief under 37 C.F.R. §1.136. A check in the amount of $120.00 is enclosed to cover the required extension fee due. No additional extensions of time are believed to be necessary; however, in the event any additional extension of time is required, that extension of time is hereby requested. Please charge any fee necessary to further the prosecution of this application, and credit any overpayments to **IBM CORPORATION DEPOSIT ACCOUNT No. 09-0447.**

REAL PARTY IN INTEREST

The real party in interest in the present Application is International Business Machines Corporation, the Assignee of the present application as evidenced by the Assignment set forth at reel 008749, frame 0251.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant, the Appellant's legal representative, or assignee, which directly affect or would be directly affected by or have a bearing on the Board's decision in the present appeal.

STATUS OF CLAIMS

Claim 15 was finally rejected by the Examiner as noted in the Final Office Action dated May 23, 2005. Claims 18-20 and 31 are currently withdrawn from consideration. The rejection of claim 15 is being appealed.

STATUS OF AMENDMENTS

No amendment has been submitted subsequent to the Final Office Action dated May 23, 2005. Claim 15 was previously amended, claims 1-14, 16-17, and 21-30 were previously canceled without prejudice or disclaimer of the subject matter recited therein, and claims 18-20 and 31 were previously withdrawn from consideration.

SUMMARY OF THE CLAIMED SUBJECT MATTER

In the claimed embodiment of Appellant's claim 15, a method of processing an electronic check is recited which comprises receiving an electronic check encrypted using a one-time pad at a business; transmitting an encrypted first copy of the electronic check to a payor's bank and an encrypted second copy of the electronic check to a payee's bank; decoding the encrypted first copy of the electronic check at the payor's bank using a copy of the one-time pad; and authenticating the electronic check. The described method embodiment further comprises transmitting the encrypted first copy of the electronic check over an unsecure communication link to a clearinghouse with a payment authorization; transmitting the encrypted second copy of

the electronic check over an unsecure communication link to the clearinghouse; comparing, at the clearinghouse, the encrypted first copy of the electronic check that has been transmitted over an unsecure communication link to the encrypted second copy of the electronic check that has been transmitted over an unsecure communication link; and responsive to determining that the encrypted first copy of the electronic check matches the encrypted second copy of the electronic check and that the payment authorization has been received, processing, at the clearinghouse, a transaction transferring funds from the payor's bank to the payee's bank. Support for the described claim elements is provided by, at least, Appellant's Fig. 7 and the accompanying description at page 21, line 28 – page 23, line 10 of Appellant's specification.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Examiner's rejections of claim 15 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,848,400 (issued to Chang, hereinafter "*Chang*") in view of U.S. Patent No. 4,558,176 (issued to Arnold et al., hereinafter "*Arnold*"), in further view of U.S. Patent No. 6,047,067 (issued to Rosen, hereinafter "*Rosen*"), in still further view of U.S. Patent No. 6,600,823 (issued to Hayosh, hereinafter "*Hayosh*") is to be reviewed on Appeal.

ARGUMENT

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference(s) or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Moreover, when applying 35 U.S.C. 103, both the claimed invention and the cited references must be considered as a whole and the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 229 USPQ 182, (Fed. Cir. 1986).

Appellant respectfully submits that the Examiner's cited references fail to teach, show, or suggest all elements of Appellant's claims and that one of ordinary skill in the art at the time of Appellant's invention would not have been motivated to combine the teachings of *Chang*, *Arnold*, *Rosen*, and *Hayosh* as suggested by the Examiner as will be described more fully herein.

Transmitting an encrypted second copy of an electronic check is not "Mere duplication"

In the Final Office Action dated May 23, 2005 the Examiner suggests it would have been obvious to modify the combined teachings of *Rosen* and *Chang* to include transmitting an encrypted first copy of an electronic check over an unsecure communication link to a clearinghouse with a payment authorization as well as transmitting an encrypted second copy of the electronic check over an unsecure communication link to the clearinghouse because, "it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8." In *St. Regis Paper*, the Seventh Circuit Court of Appeals found with regard to U.S. Patent No. 3,650,460 and reissue patents 28,317 and 28,318 that a storage bag incorporating a number of elements was obvious in view of a prior art patent including a subset of those elements in combination with a known concept of multiple bag plies. Appellant will assume for purposes of this appeal that the Examiner intended to analogize the multiple bag plies or layers of *St. Regis Paper* with the transmission of a second (as well as a first) encrypted copy of an electronic check over an unsecure communication link to a clearinghouse as claimed. Appellant respectfully disagrees.

Appellant submits that the Examiner's interpretation of the combination of *Chang* and *Rosen* in light of *St. Regis Paper* is flawed in that it fails to consider as required Appellant's claim as a whole and further fails to provide any suggestion or motivation for the Examiner's proposed combination and modification of the teachings of *Chang* and *Rosen*. More specifically, Appellant notes that the first and second encrypted electronic check copies recited in Appellant's claim 15 are elsewhere claimed as being transmitted to a payor's and payee's bank, respectively. Consequently the first and second copies are distinct from one another and their transmission to a clearinghouse over one or more unsecure communication links, rather than merely duplicating or repeating a single operation, comprises operations which are similarly

separate and distinct. Moreover, unlike in *St. Regis Paper*, in which the motivation of providing increased strength utilizing multiple bag layers or plies was provided, no justification or motive has been provided for the transmission of even identical first and second encrypted electronic check copies to a clearinghouse as proposed by the Examiner. Appellant therefore submits that the application of *St. Regis Paper*, and consequently the Examiner's rejection is improper and should be reversed.

The Examiner's cited references fail to teach, show, or suggest "comparing" as claimed

In the Final Office Action dated May 23, 2005 the Examiner states that while *Chang* fails to teach "comparing" as claimed,

> *Hayosh ('823). discloses 'comparing at said clearinghouse said first copy of said electronic check to said second copy of said electronic check; and responsive to determining that said first copy of said electronic check matches said second copy of said electronic check, processing at said clearinghouse a transaction transferring funds from said payor's bank to said payee's bank', (Abstract; Figure 11 [comparing to message digests]).*

The Examiner also states that it would have been obvious to combine the teachings of *Chang* and *Hayosh* in order to "allow the completion of a financial transaction while reducing the possibility of fraud" and further that, because *Hayosh* teaches the comparison of message digests that are derived from data contained on a check and because "the feature of comparing digests is analogous to comparing the checks themselves," comparing the encrypted first and second electronic check copies at a clearinghouse as claimed is deemed by the Examiner to be obvious. Appellant respectfully disagrees.

Appellant respectfully submits that the Examiner's rejection again fails to consider Appellant's claim as a whole. *Hayosh* teaches a method for creating a self-authenticating value document using digital signature technology at a sender's location and for verifying it at a receiver's location. More specifically, *Hayosh* teaches a self-authenticating value document created at a sender's location including clear text and cipher text which is generated using a first message digest of the clear text and a private key of a public key/private key infrastructure. The authenticity of the value document may then be verified at a receiver's location by decrypting the value document's cipher text using a corresponding public key to recreate the first message
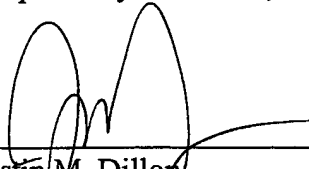
digest for comparison with a second message digest which is generated by applying a hash function to the value document's clear text.

As previously stated herein, Appellant's claim 15 recites first and second encrypted electronic check copies which are transmitted to a payor's and a payee's bank respectively as well as over one or more unsecure communication links to a clearinghouse. By contrast, *Hayosh* teaches (e.g., at Fig. 8) that using an "invention process" a value document may be authenticated via transmission to a single self-authentication module rather than to multiple banks (e.g., a bank of first deposit and a paying bank). Therefore, while the first and second message digests are compared as part of the authentication of *Hayosh*'s teaching, nowhere does *Hayosh* teach that these message digests are transmitted to payor and payee banks and/or a clearinghouse as required by Appellant's claim. Consequently, Appellant respectfully submits that *Hayosh* fails to teach, show, or suggest, "comparing" as claimed and that the Examiner has therefore failed to state a *prima facie* case of obviousness under 35 U.S.C. §103.

CONCLUSION

Appellant has pointed out with specificity the manifest error in the Examiner's rejections, and the claim language that renders the invention patentable over the reference. Appellant, therefore, respectfully requests that this case be remanded to the Examiner with instructions to issue a Notice of Allowance for all pending claims.

Respectfully submitted,

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ATTORNEY FOR APPELLANT(s)

CLAIMS APPENDIX

1-14   (Canceled)

15.   A method of processing an electronic check, comprising:

receiving an electronic check encrypted using a one-time pad at a business;

transmitting an encrypted first copy of said electronic check to a payor's bank and an encrypted second copy of said electronic check to a payee's bank;

decoding said encrypted first copy of said electronic check at said payor's bank using a copy of said one-time pad;

authenticating said electronic check;

transmitting said encrypted first copy of said electronic check over an unsecure communication link to a clearinghouse with a payment authorization;

transmitting said encrypted second copy of said electronic check over an unsecure communication link to said clearinghouse;

comparing, at said clearinghouse, said encrypted first copy of said electronic check that has been transmitted over an unsecure communication link to said encrypted second copy of said electronic check that has been transmitted over an unsecure communication link; and

responsive to determining that said encrypted first copy of said electronic check matches said encrypted second copy of said electronic check and that the payment authorization has been received, processing, at said clearinghouse, a transaction transferring funds from said payor's bank to said payee's bank.

16-17   (Canceled)

18.   (Withdrawn) A method of securing transmission of a global transponder location, comprising:

receiving a request packet via a cellular communications link to said global transponder;

encrypting a data packet containing a latitude and a longitude for a location of said global transponder using a one-time pad containing within said global transponder; and

transmitting said encrypted data packet to a central computer over said cellular communications link.

19. (Withdrawn) The method of claim 18, wherein said step of encrypting a data packet further comprises:

locating an identifier within said request packet;

comparing said identifier to a plurality of identifiers in said global transponder, wherein identifier within said plurality of identifiers is associated with a sheet within said one-time pad;

responsive to determining that said identifier within said request packet does not match any identifier within said plurality of identifiers, terminating said cellular communications link; and

responsive to determining that said identifier within said request packet matches an identifier within said plurality of identifiers, encrypting said data packet using a sheet within said one-time pad associated with said matching identifier.

20. (Withdrawn) A global transponder, comprising:

a processor connected to a memory containing a one-time pad;

a cellular modem connected to said processor and an antenna;

a GPS chip set connected to said processor and said antenna, said GPS chip set providing GPS fix data to said processor,

wherein said processor, responsive to receiving a call through said cellular modem, encrypts said GPS fix data using said one-time pad for transmission via said cellular modem.

21-30 (Canceled)

31. (Withdrawn) A global transponder, comprising:

a processor connected to a memory containing a one-time pad;

a cellular modem connected to said processor and an antenna;

a GPS chip set connected to said processor and said antenna, said GPS chip set providing GPS fix data to said processor,

wherein said processor, responsive to receiving a call through said cellular modem, encrypts said GPS fix data using said one-time pad for transmission via said cellular modem.

EVIDENCE APPENDIX

Other than the Office Action(s) and reply(ies) already of record, no additional evidence has been entered by Appellants or the Examiner in the above-identified application which is relevant to this appeal.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings as described by 37 C.F.R. §41.37(c)(1)(x) known to Appellants, Appellants' legal representative, or assignee.